

**IS GOD JUST A BIG PERSON?:
THE INFLUENCE OF RELIGIOUS BACKGROUND ON THE DEVELOPMENT
OF GOD CONCEPTS**

by

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Abstract

Developmental theories suggest that children initially conceptualize God in concrete, anthropomorphic terms. In contrast, recent research has found that from early on, children recognize God as a being radically different from humans. Previous research has been limited to studies of Christian children. The present study questioned children and adults raised in a religious tradition (Church of Jesus Christ of Latter-day Saints) emphasizing God's anthropomorphic qualities and a comparison group of traditional Christian children and adults, concerning abilities of God and dad. The results indicate that children distinguish between God and dad in terms of supernatural ability and that regardless of religious background, children acquire God concepts in a piece-meal fashion, not automatically inferring one supernatural attribute given another. In addition, theological differences in God concepts between the two religious traditions emerge late in development.

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1. INTRODUCTION

The abstract, metaphysical nature of God has long been considered to be beyond the grasp of young children. Developmental theories suggest that children initially conceptualize God in concrete, anthropomorphic terms, for example, God as a bearded man in the sky. In contrast, recent research has found that from early on, children recognize God as a being radically different from humans. The present study seeks to further this understanding of the structure and content of developing God concepts as well as to examine the influence of religious tradition and instruction.

1.1. Approaches to the Development of Religious Concepts

The traditional account of the development of religious concepts proposes that magical beliefs stem from confusion between the natural and the supernatural and has emphasized the initial anthropomorphism of God concepts. More specifically, both Piaget (1929) and Freud (1950) claim that children initially conflate the human and the divine.

Piaget's theory of the development of God concepts suggests that children are confused about the distinction between God and people in general, not just parents. Not only do children attribute supernatural or extraordinary properties to both God and people, but children also attribute human properties to God, demonstrating a general confusion between the natural or ordinary and the extraordinary. In The Child's Conception of the World, Piaget comments that

“[t]he child in extreme youth is driven to endow its parents with all of those attributes which theological doctrines assign to their divinities – sanctity, supreme power, omniscience, eternity, and even ubiquity” (p. 378, 1929). Piaget identifies age 6 as the point of major developmental change, as children at this age come to see people as fallible, subject to limitations, and thus distinct from God who retains the extraordinary properties bestowed earlier. Additionally, Piaget claims that with development, children move toward a more abstract understanding of God, further differentiating God from people in terms of the ordinary properties that characterize humans.

Freud (1950) also proposes an early generic confusion inherent in concepts of God, but his theory differs from that of Piaget in that a child’s idea of God does not stem from a generic understanding of people, but from the child’s relationship with the father as a figure of authority. Freud proposes that “the god of each of them [individual human beings] is formed in the likeness of his father, that his personal relation to God depends on his relation to his father in the flesh and oscillates and changes with that relation, and at the bottom God is nothing other than an exalted father” (p. 147). According to this view, the father is deified and with development, God takes the place of the father as a figure of authority and power. For Freud, the father in particular serves as the foundation for the God concept.

Research following in the traditions of Piaget and Freud has supported the idea that children’s initial conceptualization of God is anthropomorphic (see Barrett & Richert, 2003 for a review; Coles, 1990; Goldman, 1964, Heller, 1986). As pointed out by Barrett (2001) and by Boyer and Walker (2000), the methodologies employed in these studies, however, may have biased children toward anthropomorphic responses since the studies did not apply the methods equivalently across children of different ages. Children’s performance on tasks that ask them to

draw pictures of and tell stories about God have been compared with adults' responses to questionnaires rather than adults' performance on comparable tasks. This comparison yields the appearance of an anthropomorphic to abstract shift in God concepts, although it has yet to be determined if adults would also demonstrate anthropomorphism if asked to draw pictures of or tell stories about God. Research by Barrett and Keil (1996) suggests that adults do rely on anthropomorphic God concepts in narrative tasks that require on-line processing.

Recent cognitive developmental research has challenged the idea that young children fundamentally confuse the natural with the supernatural. Instead, children are reported to gain an early intuitive understanding of the way the world ordinarily works and recognize violations of these assumptions. For example, research in the area of theory of mind has shown that children also understand that a desire cannot lead to action at a distance. Thus young children are not generally prone to magical thinking (Chandler & Lalonde, 1994; Harris, 2000; Sharon & Woolley, 2002; Taylor, 1999; Wellman & Gelman, 1998; Woolley, 1997). That is, children expect things in the world to operate a certain way and when anomalous events do occur, they perceive such events as violations.

Researchers in the cognitive science of religion claim that religious concepts rely on ordinary cognition (Barrett, 2000b; Boyer, 1994, 2001; Lawson & McCauley, 1990). Children recognize deviations from expectations, and it is these deviations that form the basis for religious representations (Boyer, 1995, 2001; Boyer & Walker, 2000). Boyer proposes that religious concepts involve a violation of the assumptions that underlie intuitive theories as well as default assumptions. For example, the concept of a ghost involves the ontological category of person/human. A ghost can pass through solid objects thus violating assumptions about the physical properties of people, but maintaining the psychological properties of that category. For

Boyer, regardless of age, God is understood as an amalgam of violations and default intuitive expectations.

Recent research on the development of God concepts has been inspired by both the cognitive approach to religion, as exemplified in Boyer's theory, and recent research in cognitive development. Drawing on research in the area of theory of mind, Barrett, Richert, and Driesenga (2001) conducted several studies to examine how children's understanding of God's beliefs versus mother's develops. They hypothesized that if children's God concepts are characterized by anthropomorphism, the constraints children ascribe to humans will also be ascribed to God, but if children understand God to be an agent of a sort that differs from a human agent, then children may not extend human constraints to God. To test this hypothesis, Barrett et al employed false belief tasks to determine if children, once they understood that mom's knowledge is constrained, would extend this limitation to God (anthropomorphically God as similarly limited) or would appreciate God's distinctly superhuman omniscience. In the two false-belief experiments, children ranging in age from 3 to 6 years were presented with a cracker box that contained rocks and a closed brown paper bag that contained crackers. Children were shown the cracker box and asked what they thought was inside, the appropriate answer being "crackers." The children were then shown the actual contents of the box, i.e., rocks, and that the crackers were actually in a paper bag. After the containers were closed, the children were asked the standard false-belief questions about what their mothers would think was in the cracker box. Consistent with other theory of mind research (Wellman & Gelman, 1998), most of the 3- and 4-year-olds said that their mothers would think that there were rocks inside the box, whereas the 5- and 6-year-olds attributed false-belief to their mothers, saying that mom would think that there were crackers in the box. However, when children were asked the same question about God, the

same pattern did not emerge. Regardless of age, children answered that God would know what was actually inside of the box.

At first glance, results of Barrett et al appear to agree with Piaget, but on closer examination the results suggest that children are distinguishing between mom and God by 5 years of age, earlier than Piaget suggests. In addition, Barrett et al.'s construal of the development of God concepts differs from Piaget's in terms of domain specificity. Whereas Piaget's theory of cognitive development suggests that the development of children's God concepts will like-wise demonstrate broad changes, Barrett et al claim that the development of the God concept develops in a more piece-meal fashion. That is, the God concept is composed of knowledge from different domains. As an agent concept, the representation of God incorporates the domains of intuitive psychology, biology, as well as physics. As knowledge in these different domains changes, so will children's concept of God, but theories concerning this knowledge do not change all at once, as Piaget would suggest.

1.2. Omniscience and Immortality

Gimenez, Guerrero, and Harris (2000) extended the Barrett et al research in two ways. First, in addition to looking at children's attributions of omniscience, they looked at attributions of immortality to a friend and God. Second, they were also interested in examining the influence of explicit religious education by drawing participants from two different schools, a Catholic school with explicit religious instruction, and a secular school that did not include such instruction. Gimenez et al asked 3-, 4-, and 5-year-old children if psychological (knowledge) or biological (life) constraints applied to God and their best friend. Overall, the results demonstrated that regardless of type of school attended, 3-year-olds failed to distinguish between God and their friend, whereas 5-year-olds attributed psychological and biological constraints to their best friend

but not to God. Thus, the context of religious instruction did not appear to affect the development of children's God concepts. Children seem prepared to pick up God concepts from the general cultural environment without any special religious instruction.

1.3. Limitations of Previous Research

Taken together, the research thus far suggests that God is distinguished from humans early in development. However, this research has been limited in several respects. First, the previous research has looked at God concepts in contrast to the understanding of mothers and friends. However, traditionally and as Freud suggests, it is fathers that have been regarded as the prototype for God. On this account, it may be that God is more readily differentiated from friends and mother than from father. The present study explores this possibility. Second, previous research focused on extraordinary mental attributes and immortality, but did not explicitly consider other properties typically attributed to God, such as immateriality and omnipotence. Third, the previous studies have been limited to children from traditional Christian backgrounds who have been exposed to concepts of God that emphasize the distinction between God and humans, particularly in terms of God's attributes of omniscience, omnipotence, and immortality. The present study examines the development of God concepts in children raised in a religious context that emphasizes anthropomorphic qualities of God as a personified, embodied heavenly father.

1.4. Traditional Christian and LDS Theologies

In theology and religious education, the Church of Jesus Christ of Latter Day Saints (LDS) emphasizes that God is an embodied, Heavenly Father. According to LDS theology, God was once a man, but has evolved into a deity. God not only has a physical body, but also is subject to

the laws and principles of the universe, limited in power and in knowledge, mutable, contingent, and not omnipresent (Beckwith & Parrish, 1991). God exercises his power through natural laws, although what is accomplished may be perceived by people to be miracles. God's knowledge is limited, but is aided by intermediaries such as angels, and that knowledge continues to increase as the future unfolds. Since God is embodied, God cannot be omnipresent. God's influence, however, may be omnipresent by means of other agents or intermediaries that reflect God, such as angels, prophets, apostles, and teachers (Beckwith & Parrish, 1991).

Through LDS religious education, this theology is introduced to children starting at an early age, beginning officially at 18 months when children attend nursery school during part of the LDS worship service. From age three through seven, children continue their religious education by attending a set of lessons called Primary (Money, 2002). The lessons that are taught are specified in a manual that every teacher receives (Primary 1, 1996; Primary 2, 1995). In Primary 1: I Am a Child of God (1996), children from 18 months to 3 years are taught basic LDS theology. For example, the first lesson concerns the idea that children are spirit children of Heavenly Father and instructs teachers to explain to children that "just as animals grow up to be like their parents, we will grow up to be like our parents. Heavenly Father is the father of our spirits, so we can grow to be like him" (Primary 1, p.2). The physicality of God is emphasized as early as the second lesson, the purpose of the lesson being "[t]o help each child understand that Heavenly Father is a real person, with a real body of flesh and bones, and that we are made in his image" (p. 4). The Primary teacher manuals suggest that, at least some aspects of LDS theology (God's embodiment) are explicitly taught. Additionally, the lessons promoting these aspects of LDS doctrine are taught repeatedly throughout the Primary years (ages 3-7) and are also reinforced through songs and activities (Money, 2002).

In Traditional Christian theology, God's properties include, omniscience, or possessing unlimited knowledge, immateriality, or lacking physical constraints, and omnipotence, or having unlimited power in terms of causal influence on the world, and immortality. Thus the, four characteristics that define the traditional Christian God concept were identified as omniscience, immateriality, omnipotence, and immortality or lack of biological constraints. In contrast to these characteristics, LDS theology conceptualizes God as material and limited in knowledge and power (Beckwith & Parrish, 1991). These differences between Traditional Christian and LDS theologies guided the design of the present study. It was hypothesized that LDS participants would differ from traditional Christian participants in attributing omniscience, immateriality, omnipotence, and immortality to God, with immateriality and immortality hypothesized as being especially likely to differ between the two groups. Since many Latter Day Saints acknowledge that God is omniscient, but only so with the help of intermediaries, and omnipotent, but only within the constraints of universal laws, it was decided to include forced-choice questions to clarify the underlying understanding behind the answers to the initial questions.

The present study examines different theories concerning the development of God concepts with children from different religious backgrounds. Previous research on God concepts has focused on the contrast between God and either mom or a friend, but not dad. If Freud's theory is accurate, a religious tradition with emphases on God as an embodied Father and a traditional family structure should promote an early tendency to confuse God and dad. Previous research on God concepts has been limited to examining a narrow range of supernatural attributes. The present study extends this research by looking at a wide range of attributed across multiple domains. By including a religious tradition with a theology emphasizing a distinctly

anthropomorphic God, the present study seeks to explore when and how theology is playing a role in the acquisition and development of God concepts.

The present study sets out to determine how readily children would acquire God concepts that either resemble or contrast that of a human father in the context of different religious traditions. To test for possible differences in the development of God concepts, children, aged 4 – 6 years, and adults from Traditional Christian (Protestant and Roman Catholic) and Latter Day Saints backgrounds were questioned about psychological, physical, and biological properties of God and a human father. The questions included both extraordinary characteristics that violate intuitive assumptions for the ontological category of person, as well as ordinary abilities and constraints for that category.

The questions this research addresses are the following:

1. Will children distinguish God from dad as they have been shown to do with mom and a friend?
2. Concerning God, will LDS children demonstrate a more anthropomorphic God concept than will Traditional Christian children?
3. Will LDS children attribute more extraordinary properties to dad than will Traditional Christian children?
4. Will children disregard domain in making attributions as Piaget's idea of general confusion would suggest, or will extraordinary attributes be applied differentially by domain?
5. Are differences in attribution of extraordinary properties related to differences in particular theological tenets?

2. METHOD

2.1. Participants

A total of 93 children ranging in age from 4 years, 0 months to 6 years, 11 months, and 54 adults served as participants in this study. The 48 LDS children were recruited through Latter Day Saints connections of collaborators in Utah. The 16 LDS adults were recruited from a university in Utah. The 45 Christian children were recruited from a pre-school and after-school program in suburban Western Pennsylvania. The remaining 38 adults were recruited from a psychology class at an urban university in Western Pennsylvania. Nine of the adult participants identified themselves as other than Christian, i.e., atheist, agnostic, Jewish, etc., and their data was excluded from the analyses. In addition, data was excluded from children whose dates of birth were not available. To ensure that the child age groups from each religious tradition were of equivalent size and had similar mean ages, children were first sorted by age. Then, several subjects, aged 5 years, six months, were randomly selected to be excluded. The analyses include 45 adults (16 LDS, with a mean age of 22 years and 29 TC, with a mean age of 22 years), 38 older children (19 LDS, with a mean age of 4.73 years and 19 TC, with a mean age of 4.96 years), and 44 younger children (22 LDS, with a mean age of 6.15 years and 22 TC, with a mean age of 5.87 years).

2.2. Procedure

Each child was individually tested by the experimenter in a quiet room or area of the pre-school. A pre-test was administered in which each child was asked if he or she knew who God was. If a

child answered “Jesus” to this pretest question, the experimenter made sure that the child understood that the question was asking about God in heaven and not Jesus. The children were also told that sometimes they might think that God and daddy can do the same things and sometimes they might think that God and daddy can do different things, to avoid possible bias in their responses.

Following the pretest, the child was asked questions about the abilities of God and daddy in terms of knowledge, physicality, power, and biology. These four categories of items were derived from the four characteristics of God in traditional Christian theology: omniscience, immateriality, omnipotence, and immortality. For each group, three items were generated, resulting in 12 questions overall for the task. The items were randomly presented and the order of character presentation was counterbalanced across participants. For each item within the larger category, with the exception of the biological items, the child was initially asked a yes/no question concerning whether the character (God or daddy) would be able to perform the supernatural action in question. After each answer, an appropriate forced-choice question was asked to determine whether the child explained the character’s performance as being due to supernatural versus natural causes. The order of the choices in the forced-choice questions was also counter-balanced across participants. The same initial question was then asked about the other character (daddy or God). For the three biological items, only forced-choice questions were asked.(See Appendix).

The knowledge items involved questions about abilities that in some way violate how people understand how ordinary human psychology works. These items included questions about mind reading, prayer, and knowledge of all the books in the world. For example, children were asked if God or daddy knew what they were thinking at that moment. The physicality

items asked about extraordinary actions that depend upon a lack of physical constraints. Items in this category included invisibility, the ability to walk through walls, and omnipresence. For example, children were asked if God or daddy could be at home, at work, and at school all at the same time. The power items asked about the ability of God and daddy to act on the world by extraordinary means. For example, children were asked if God or daddy could turn a rock into a real puppy. Items included in this category were lifting a mountain, magical transformation, and healing.

The biological items differed from the other items in that a preliminary yes/no question about an extraordinary ability was not asked. The biological items included forced-choice questions about whether or not God or daddy is constrained by biology. Since LDS theology emphasizes that God is embodied, whereas TC theology depicts God as disembodied, the biological items were presented to determine the influence of these explicit theological tenets on whether or not God is understood as embodied. These items included having once been a baby, needing to eat and drink, and having a body with arms and legs.

3. RESULTS

Participants' responses were scored as "1" for an extraordinary attribution (yes) and 0 for an ordinary attribution (no). Judgments for three items in each domain were summed (ranging from 0 to 3) for a domain score. Mean scores across domains constitute an overall extraordinary ability judgment score.

3.1. Preliminary Analyses

Independent samples t-tests revealed that within the older age group, the LDS children ($M = 6.15$ years, $SD = .375$) were significantly older than the TC children ($M = 5.87$ years, $SD = .358$), $t(36) = 2.376, p = .023$. Within the younger group of children, the opposite pattern occurred, with the LDS children being ($M = 4.73$ years, $SD = .460$) significantly younger than the TC children ($M = 4.96$ years, $SD = .210$), $t(42) = -2.184, p = .035$.

To assess possible effects of these age differences two analyses were compared. First, a separate 3-way religious affiliation x character x attribute ANOVA was run for each of the age groups. Second, an ANCOVA using age in days as a covariate, but including the same three factors as the ANOVA was run. Comparing the two analyses, the results of the ANCOVA for each age group were identical to the results of the ANOVA in terms of which effects were significant and which effects were not significant. In addition, the covariate in the ANCOVA was not significant for both of the age groups, indicating that the exact age of children within the same age group is not significantly related to their responses on the dependent variable.

3.2. Do children distinguish between God and dad?

Figure 1 presents children's overall attributions of extraordinary abilities to God versus Dad by age. A 2-way character x age ANOVA confirms a significant main effect of character, $F(1, 124) = 1061.26, p < .0001$. Children clearly distinguished between God and dad in terms of the attribution of extraordinary ability. In addition, there was a significant main effect of age, $F(2, 124) = 7.90, p = .001$. The character x age interaction was also significant, $F(2, 124) = 33.95, p < .0001$. Although even the youngest children significantly distinguished God from dad in terms of extraordinary ability, this distinction became greater with age.

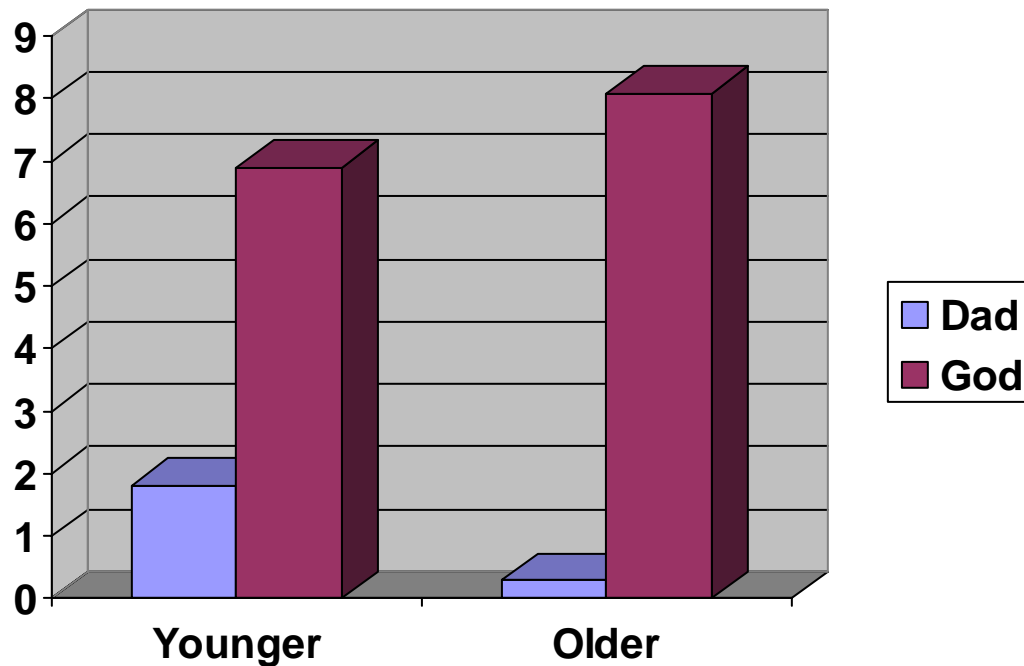


Figure 1: Mean extraordinary attributions to dad and God of younger and older children.

3.3. Are there any religious differences in distinguishing between God and Dad?

Although children distinguish between dad and God, this distinction may not be the same for children from LDS and TC religious backgrounds. To determine if religious background influences this distinction, a 3-way character x age x religious affiliation ANOVA was run looking only at the child groups. No significant effects of religion were found.

What about the judgments of adults? Figure 2 depicts judgments by age and character for all age groups. Overall, these results show very similar patterns across age for both religious

groups. With the adult group added to the ANOVA, however, a significant religion x age interaction appeared, $F(2, 121) = 4.039, p = .020$.

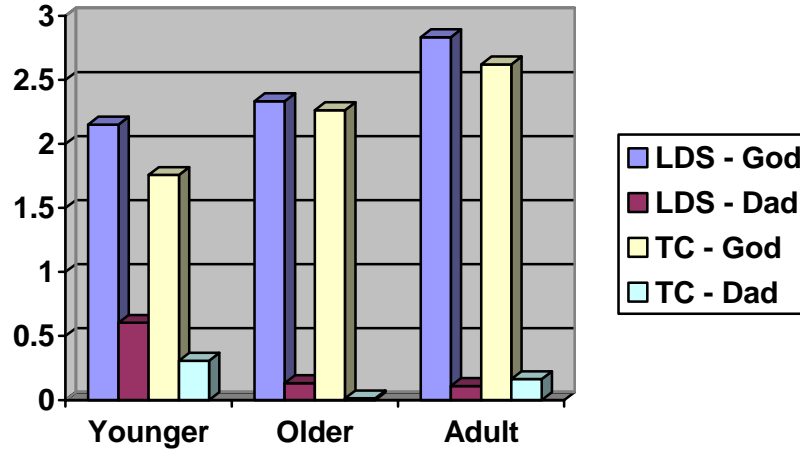


Figure 2: Overall supernatural attributions to God and dad by age and religious affiliation.

3.4. Do LDS children inflate the powers of Dad?

Although children in both religious groups appreciated God's distinctly extraordinary powers, LDS children exhibited a small but significant tendency to inflate Dad's abilities (See Figure 3). A 2-way age x religious affiliation ANOVA looking at responses for dad only revealed a significant main effect of age, $F(1, 78) = 15.056, p < .0001$, and religious affiliation, $F(1, 78) = 4.414, p = .039$. Although the absolute level of judgment was low, the younger children had a higher mean extraordinary attribution score ($M = .46, SD = .76$) than the older children ($M = 0.072, SD = .31$). The LDS children ($M = .38, SD = .73$), attributed more extraordinary properties to dad than did the TC children ($M = .17, SD = .46$).

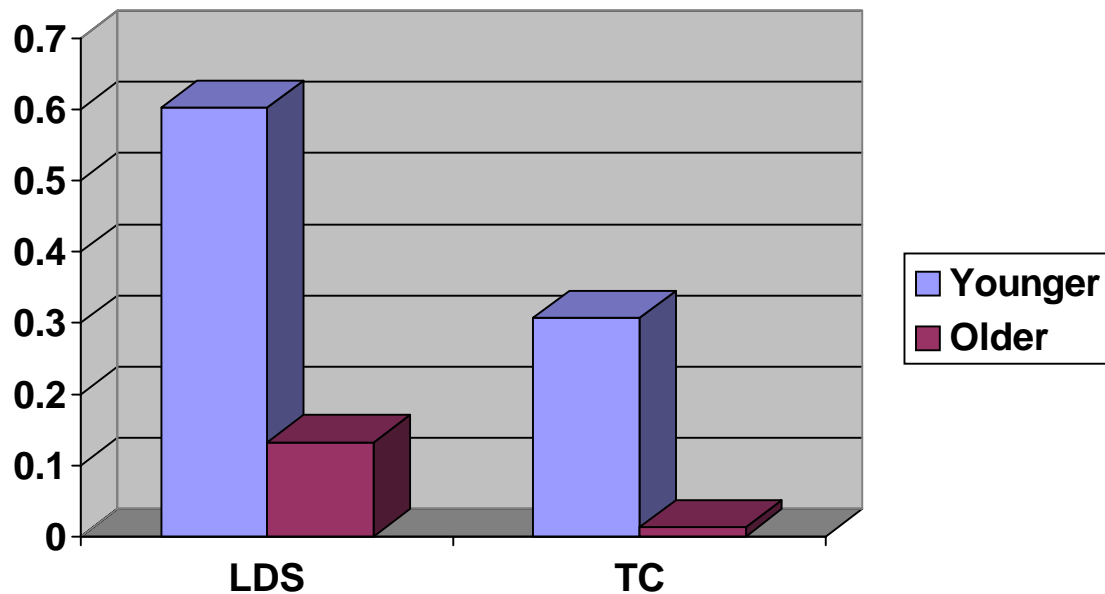


Figure 3: Attribution of extraordinary ability to dad by age and religious affiliation.

3.5. Do LDS children depreciate God's extraordinary powers?

To examine if there were effects of religious affiliation on overall attribution of extraordinary ability to God, a 2-way age x religious affiliation ANOVA looking at responses to God only among the older and younger children was run. Results indicated a significant main effect of age. The mean attribution of extraordinary ability to God of the older children ($M = 2.02$, $SD = .92$) was higher than that of the younger children ($M = 1.73$, $SD = .97$) and this difference was significant, $F(1, 78) = 4.277$, $p = .042$. Religious affiliation was not significant.

A 2-way age x religious affiliation ANOVA was also run with the adults included. As with the child groups, the main effect of age was significant, $F(2, 121) = 19.67$, $p < .001$, with

an increase in attribution of extraordinary ability related to an increase in age. No other results were significant. Thus, with age, God is increasingly understood as having extraordinary power. However, overall, attributions of extraordinary power to God did not vary by religious affiliation.

3.6. Domain-specific Analyses

To determine if the distinction between God and dad held across the different domains of extraordinary properties, a 3-way character x attribute (domain) x age ANOVA was run. Looking at the child groups only, this ANOVA produced significant main effects of character, $F(1, 80) = 403.95, p < .0001$, and attribute, $F(3, 240) = 42.19, p < .0001$. The mean attribution of extraordinary ability was highest in the domain of knowledge ($M = 1.54, SD = .096$) and lowest in the domain of biology ($M = .64, SD = .083$). While there were significant interactions between character and age group, $F(1,80) = 17.73, p < .0001$, and between character and attribute, $F(3, 240) = 22.29, p < .0001$, there was no main effect of age, $F(1, 80) = .23, p = .63$, nor an attribute x age group interaction, $F(3, 240) = 1.42, p = .24$. Combining the two age groups, Figure 4 shows the attributions by domain to God and Dad.

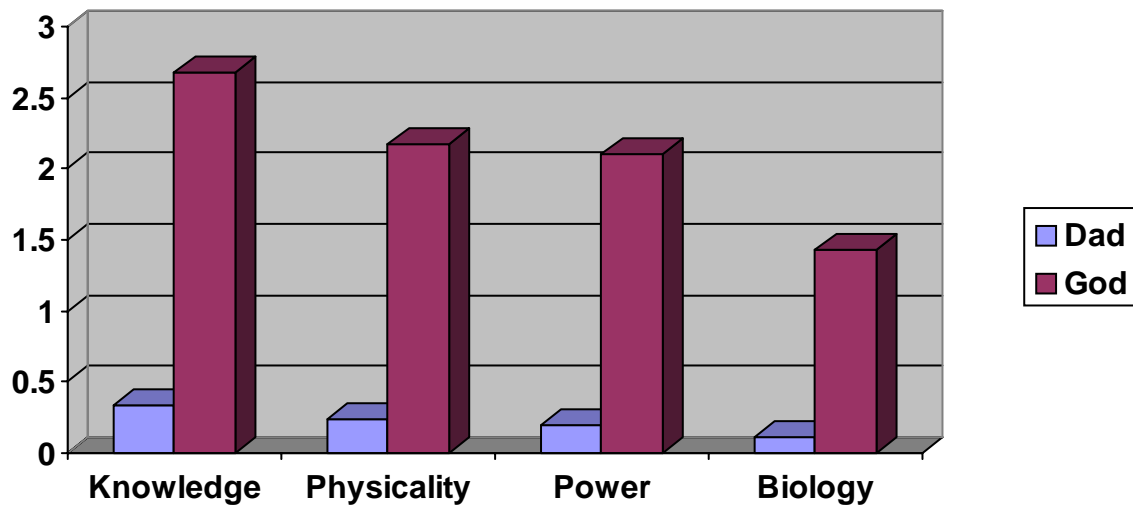


Figure 4: Attributions to God and dad by domain.

A 3- way age x character x attribute ANOVA was also run with the adults included. As with the child groups, this analysis also produced significant main effects of character, and attribute, and significant interactions between character and age group and between character and attribute. In contrast to the findings with the children's groups, the main effect of age was significant, $F(2, 124) = 7.90, p = .001$, as was the attribute x age group interaction, $F(6, 372) = 5.44, p < .001$. For all age groups, the highest mean extraordinary attributions were in the domain of knowledge and the lowest in the domain of biology, but this contrast was especially strong for the youngest age group.

Since theological differences between the two religious traditions suggest that there may be domain differences in attributions to God between the two religious groups, analyses were also conducted to look at the interaction between religion and attribute. A 4-way character x attribute x religious affiliation x age ANOVA indicated significant interactions between attribute

and religious affiliation, $F(3, 363) = 10.63, p < .0001$, attribute, age, and religious affiliation, $F(6, 363) = 2.53, p = .020$, character, attribute, and religious affiliation, $F(3, 363) = 14.64, p < .0001$, and character, attribute, age, and religious affiliation, $F(6, 363) = 2.44, p = .025$. Thus, attributions of extraordinary abilities did vary by attribute type (or domain) and also depended on religious affiliation.

The results of the previous analyses suggested that extraordinary attributions to both God and dad might vary by domain and that the domain of attribute interacts with religion. To further explore these effects, separate ANOVAs were run for each domain of attributes.

3.6.1. Knowledge

To determine if knowledge constitutes a special domain, a 3-way age x religious affiliation x character ANOVA was run on children's attributions in the knowledge domain. This analysis yielded a significant main effect of character, $F(1, 78) = 291.48, p < .0001$, with children attributing greater extraordinary mental ability to God ($M = 2.57, SD = .75$) than to dad ($M = .51, SD = .97$). The character x age group interaction was also significant, $F(1, 78) = 20.42, p < .0001$. The youngest age group attributed extraordinary mental abilities to dad more than the other groups did. In addition, religious affiliation was significant. The LDS group ($M = 1.72, SD = .12$) had a higher mean extraordinary attribution score than the TC group ($M = 1.35, SD = .12$), and this difference was significant, $F(1, 78) = 8.06, p = .006$.

A 3-way age x religious affiliation x character ANOVA was also run with adults included. In this analysis, the age x religious affiliation interaction was also significant, $F(2, 121) = 3.37, p < .05$. The younger LDS children had the highest mean extraordinary attribution in this domain of any of the other groups. This result is to be expected, given that this group also had higher attribution of extraordinary ability to dad as well.

Post hoc interaction contrasts for knowledge looking at age and character, revealed no difference between adults and the older children, but there were significant differences between the younger children and adults, $t(87) = 6.29$ and between the younger and older children, $t(80) = 5.16$. The difference in extraordinary attribution of knowledge between God and dad was narrower for the younger children than for either the older children or adults.

Within each age group, a religious affiliation x character ANOVA was run to compare the two religious groups for attribution of extraordinary knowledge. Religious differences only surfaced with the younger children. The younger LDS children ($M = 1.93$) attributed more extraordinary mental abilities overall, to both characters, than did the younger TC children ($M = 1.34$), and this difference was significant, $F(1, 42) = 7.93, p = .007$. The character x religious affiliation interaction was not significant for any of the age groups.

3.6.2. Physicality

To examine if physicality qualifies as a separate domain, a 3-way age x religious affiliation x character ANOVA was computed for children's attributions of extraordinary physicality. The results indicate a significant main effect of character, $F(1, 78) = 241.95, p < .0001$, with God ($M = 1.88, SD = 1.01$) construed as more extraordinary than dad ($M = .17, SD = .49$) in this domain. In addition, the character x age group interaction was significant $F(1, 78) = 9.67, p = .003$. Extraordinary physical attributions to God increased with age and those for dad decreased with age.

When adults were included in the analysis, there emerged a significant main effect of age group, $F(2, 121) = 11.63, p < .0001$, but not religion, $F(1, 121) = .65, p = .42$.

Post hoc interaction contrasts for physicality looking at age and character, revealed no difference between adults and the older children, but there were significant differences between

the younger children and adults, $t(87) = 4.15, p < .01$, and between the younger and older children, $t(80) = 3.011, p < .01$. Again, for the domain of physicality, the difference between God and dad in terms of the younger children's attributions of extraordinary ability was smaller than for the other age groups. The younger children understood dad and God as more similar physically, than did the other age groups.

Within each age group, a religious affiliation x character ANOVA was run to compare the two religious groups for attribution of extraordinary physical abilities. Neither religious affiliation nor the character x religious affiliation was significant for any of the age groups.

3.6.3. Power

To determine if power stands as a special domain, an age x religious affiliation x character ANOVA was conducted that revealed a significant main effect of character, $F(1, 78) = 152.09, p < .0001$, with God ($M = 1.89, SD = 1.14$) receiving more attributions of extraordinary power than dad ($M = .26, SD = .62$). The interaction between character and age was also significant, $F(1, 78) = 3.98, p = .05$. The older children had the lowest extraordinary attribution scores. Attributions of extraordinary power to God increased with age.

When adults were included in the analysis, in addition to the significant results found with the child groups, there was also a significant main effect of religion. The TC group ($M = 1.042, SD = .82$) had lower mean attributions than the LDS group ($M = 1.30, SD = .82$) and this difference was significant, $F(1, 121) = 6.40, p < .05$. In addition, the interaction between character and religion was marginally significant when the adults were included in the analysis, $F(1, 121) = 3.88, p = .051$. The LDS ($M = 2.33, SD = .97$) had a higher attribution score for God than the TC ($1.93, SD = 1.23$).

Post hoc interaction contrasts for power, looking at age and character, revealed significant differences between adults and the older children, $t(81) = 2.27, p < .05$, and between the adults and the younger children, $t(87) = 4.46, p < .05$. The difference between the younger children and the older children was not significant, $t(80) = 1.45, p > .05$. The younger children believe that God and dad are closer in terms of extraordinary power than did the adults, with the older children falling in between the other two age groups.

Within each age group, a religious affiliation x character ANOVA was run to compare the two religious groups for attribution of extraordinary power. Religious differences only surfaced with the adults. LDS adults ($M = 1.531$) attributed more extraordinary power than did the TC adults ($M = 1.190$), and this difference was significant, $F(1, 43) = 4.73, p = .035$. In addition, the character x religious affiliation interaction was only significant for the adults, $F(1, 43) = 7.070, p = .011$. The LDS adults ($M = 3.0, SD = .00$), on average, attributed more extraordinary power to God than did the TC adults ($M = 2.24, SD = 1.18$).

3.6.4. Biology

To determine if biology constitutes a special domain, a 3-way age group x religious affiliation x character ANOVA was conducted for biology. A significant main effect of character was found, $F(1, 78) = 82.54, p < .0001$, with God ($M = 1.11, SD = .94$) receiving more extraordinary attributions in this domain than dad ($M = .17, SD = .41$). The character x religious affiliation interaction was significant, $F(1, 78) = 8.81, p = .004$. The LDS group ($M = .94, SD = .15$) attributed fewer extraordinary attributions to God in the biological domain than did the TC group ($M = 1.26, SD = .15$).

With the adults included, the main effect of age was significant, $F(2, 121) = 5.597, p = .005$. The adult group ($M = 1.044, SD = .58$) had a higher mean attribution of extraordinary

ability in this domain than the older ($M = .62$, $SD = .63$) and younger ($M = .66$, $SD = .68$) age groups. In addition, the main effect for religious affiliation was also significant, $F(1, 121) = 10.265$, $p = .002$, with the LDS groups ($M = .61$, $SD = .63$) attributing more ordinary and less extraordinary biological properties to both dad and God than the TC groups ($M = .92$, $SD = .62$). The character x age group interaction was significant, $F(2, 121) = 15.65$, $p < .0001$. Extraordinary attribution to God increased with age, whereas extraordinary attribution to dad decreased with age. The character x age group x religious affiliation interaction was significant, $F(2, 121) = 5.058$, $p = .008$. With age, the extraordinary attributions to God in the domain of biology increased among the TC, but remained the same among the LDS (See Figure 5).

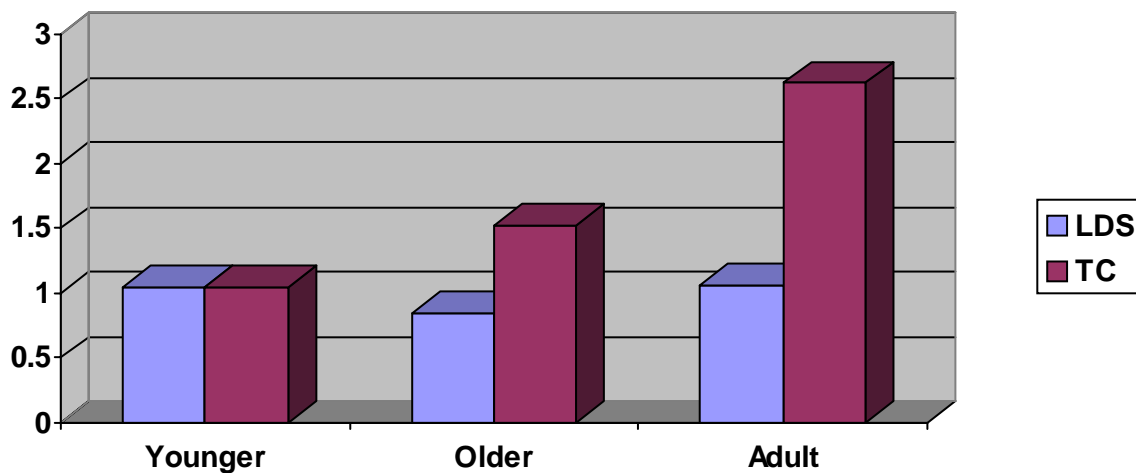


Figure 5: Attributions of extraordinary biological properties by age and religious affiliation.

Post hoc interaction contrasts for biology, looking at age and character, revealed significant differences between adults and the older children, $t(81) = 3.43$, $p < .01$, and between the adults and the younger children, $t(87) = 5.44$, $p < .01$. The difference between the younger

children and the older children was not significant, $t(80) = 1.80, p > .05$. The younger children understood God and dad as being closer in terms of extraordinary biology than did the adults, with the older children falling in between the other two age groups.

Within each age group a religious affiliation x character ANOVA was conducted. Again, the main effect for character was significant for each age group (adult, $F(1, 43) = 279.073, p < .0001$; older, $F(1, 36) = 45.592, p < .0001$; younger, $F(1, 42) = 35.081, p < .0001$), with God receiving more extraordinary attributions than dad. Significant religious affiliation x character interactions were found for the adults, $F(1, 43) = 55.92, p < .0001$, and the older children, $F(1, 36) = 5.55, p < .05$, but this interaction was not significant for the younger children, $F(1, 42) = 3.035, p = .089$. There was no difference between the younger LDS and TC children in extraordinary biological attributions to God. The older TC children ($M = 1.53, SD = .96$) attributed more extraordinary biological properties to God than did the older LDS children ($M = .84, SD = 1.01$). The adults demonstrated the most dramatic difference with the TC adults ($M = 2.62, SD = .68$) attributing to God more extraordinary biological properties than the LDS ($M = 1.063, SD = .68$). The main effect for religious affiliation was not significant for the younger children, $F(1, 42) = 1.937, p = .171$, or the older children, $F(1, 36) = 3.212, p = .081$, but was significant for the adults, $F(1, 43) = 48.202, p < .0001$. Thus, an understanding of extraordinary biological attributes of God appears to be a late acquisition among the Tradition Christian groups.

3.7. Validity of Domains

Individual items were examined since the categories of items have not been firmly established. To determine if the individual items or attributes and the categories into which they were placed concurred with the understanding of participants, the attributes were subjected to an orthogonal

factor analysis. This analysis indicated that the attributes loaded onto two factors (See Table 1). The knowledge items of think and pray clearly loaded on to one factor. The physicality and power items, as well as the knowledge item of know, loaded onto another factor. Factor 1 includes items that involve access to the mental activity of others. Factor 2 consists of all other items, the majority of which involve interactions with the world that have physical consequences. The item of knowing everything in all of the books in the world is the exception. In this case, God and Dad are required to have knowledge of the content of physical books rather than access to information contained in minds.

Table 1: Factor loadings

	Factor 1	Factor 2
Think		.815
Pray		.875
Know	.652	
Walk through Walls	.709	
Omnipresence	.654	
Invisibility	.496	
Magic Transformation	.765	
Lift Mountains	.831	
Healing	.556	

3.8. Explanations

Although participants appeared to view God in extraordinary terms, follow-up, forced-choice questions were also asked to determine if these attributions were truly extraordinary or if there was an ordinary explanation underlying the response. The explanations were of particular

importance for the LDS sample to ascertain if attributions of extraordinary ability to God were explained in natural terms, as would be expected given LDS theology. Explanation data were coded as follows: a score of “1” was given if a participant responded “yes” that God could accomplish the given feat for extraordinary reasons, and “no” that God could not because such a feat is naturally impossible. (One child in the LDS younger group who was included in the other analyses was excluded in the explanation ANOVA because the child did not answer any of the follow-up forced choice questions).

To examine the data using this stricter coding, a 2-way age x religious affiliation ANOVA was run for the explanation data. This ANOVA indicated a significant main effect of age, $F(2, 120) = 34.09, p < .0001$, and age x religious affiliation interaction, $F(2, 120) = 4.92, p = .009$. Figure 6 shows the mean number of supernatural explanations for attributions of extraordinary ability to God. Whereas the LDS and TC younger children and adult groups had similar mean supernatural scores for God, the TC older children had a higher mean supernatural score for God ($M = 5.63, SD = 2.65$) than the LDS older children ($M = 3.16, SD = 2.41$). Whereas the LDS adults demonstrate a view of God as highly extraordinary, the responses of the older LDS children indicate a more natural understanding of God’s extraordinary abilities, in line with a face-value interpretation of LDS theology.

3.9. Theological Tenets

To more carefully examine the possible theological differences regarding specific items, chi-square analyses were run, comparing the religious groups solely in their judgments about God’s distinctive powers. For the first set of chi-square analyses, involving items in the domains of knowledge, physicality, and power, responses were coded as God only (is able to do the feat, whether or not it is for extraordinary reasons) (“1”) vs. all other responses (“0”). For the

analyses of the biological items, responses were coded as Dad only (has the natural characteristic) (“1”) vs. all other responses (“0”). Significant religious differences only appeared among adults, appearing for the following items: omnipresence or being able to be in two places at once ($\chi^2(1) = 9.10, p < .01$), the ability to become invisible ($\chi^2(1) = 8.032, p < .01$), magical transformation of a rock into a puppy ($\chi^2(1) = 9.87, p < .01$), healing a person born with no eyes ($\chi^2(1) = 6.20, p < .025$), having once been a baby ($\chi^2(1) = 20.86, p < .001$), and having a body ($\chi^2(1) = 27.022, p < .001$). These results correspond with the subtle theological differences (i.e., God’s physical status) that appear to be late-emerging. Table 2 presents the percentage of adults within each religious tradition that responded that God only had the extraordinary ability. LDS adults more consistently attribute powers to God, including invisibility, than do TC adults, with the exception of omnipresence. Table 3 shows the percentage of adults within each tradition that responded that Dad only had the natural characteristic. Although, for the LDS, God was once a baby and has a body, he nevertheless is regarded as radically different from an ordinary human being.

Table 2: Percentage of adults within each religious tradition responding that God only has the extraordinary ability

	LDS	TC
Omnipresence	62.5	96.6
Invisibility	100	62.1
Magical Transformation	100	54.5
Healing	100	69.0

Table 3: Percentage of adults within each religious tradition responding that dad only has the natural biological property

	LDS	TC
Was once a Baby	12.5	82.8
Lives with a Body	6.3	86.2

4. DISCUSSION

Overall, the results suggest that regardless of religious background, even the youngest children distinguished the extraordinary powers of God from the natural constraints of Dad. Regardless of religious background, children were most prepared to understand the extraordinary mental powers of God and least prepared to understand disembodied attributes. Regardless of religion, there was little age change in the understanding of God's extraordinary mental abilities. Children appeared least ready to understand the abstract, disembodied attributes of God. LDS children did show some tendency to attribute extraordinary properties to dad. In addition, LDS children did not demonstrate a more anthropomorphic God concept than Traditional Christian children, but did show a tendency to view God as more extraordinary. Despite the general LDS view of God as extraordinary, with development, the LDS maintain that God is embodied, in line

with LDS theology. In contrast, abstract disembodied conceptions of God uniquely emerge late in development among traditional Christians.

Consistent with intuitive theory, the results indicate that children appear prepared to distinguish between ordinary and extraordinary qualities of dad and God regardless of religious background. The LDS children were no more or less anthropomorphic in their understanding of God than their TC counterparts. In addition, the results suggest that God concepts are more differentiated than Piaget suggests. That is, God concepts are not generalized supernatural agents, but involve properties and abilities that fall into different domains. The different aspects of God concepts do not emerge all at once, but follow different developmental timelines. Children appear to more readily understand the extraordinary mental attributes of God than other supernatural attributes in other domains. Consistent with Piagetian tradition, however, the results also suggest that conceiving of God as disembodied is a late, theologically dependent achievement.

Although overall the LDS children did not demonstrate a more anthropomorphic God concept than the Traditional Christian children, the younger LDS children did attribute more extraordinary abilities to dad. While these attributions were absolutely small in number, they were relatively higher. This result is in line with LDS theology in which both God as a Heavenly Father and the traditional family are emphasized as important. Regardless of religion, children did more readily appreciate God's ability to violate mental constraints than physical or bodily constraints. In this sense, they demonstrated some anthropomorphism in their God concepts. There are two possible explanations for this result. First, the discrepancy between mental and physical properties may have to do with how God is represented by the culture. Perhaps narratives about God told to Traditional Christian children focus on God's extraordinary mental

abilities (God's abilities of receiving prayers and engaging in mental communication) and downplay God's immateriality. Thus, children may have more practice with representing extraordinary mental abilities than abilities in other domains.

An alternative explanation would be that extraordinary mental properties are more readily understood by young children than are extraordinary physical properties. Young children's relatively undeveloped understanding of mental processes may allow them to readily acquire a God concept that involves extraordinary abilities. In contrast, young children have had much experience with the physical world and it may be difficult to override that understanding in reasoning about agents with extraordinary physical properties. That is, violations of expectations concerning the physical world may be more difficult to represent.

The results of the present study, specifically concerning the mental domain, support other research that has demonstrated that an understanding of extraordinary mental ability may be readily acquired (Barrett & Richert, 2003; Barrett et al., 2001; Gimenez et al., 2000). Barrett and Richert have construed this readiness as "preparedness," or the idea that certain concepts are more easily acquired given their existence early in development. More specifically, Barrett and Richert have hypothesized that children go through a period in which they think God and humans have unconstrained mental powers. According to this "preparedness" perspective, children's knowledge in certain areas is underdetermined in such a way that some supernatural concepts have an advantage early in development. In contrast to Piaget's notion, this theory suggests that young children might possess a more abstract understanding of God than previously thought. The results of the present study support the idea of preparedness in the mental domain, but call into question the limits of such ready acquisition in other domains. It

has yet to be determined whether and in what domains beyond the mental this same preparedness exists.

In addition, the results of the present study add to other recent research on infant cognition and children's afterlife beliefs that suggests that dualistic thinking comes easily. Kuhlmeier, Bloom, and Wynn (2004) propose that five-month-old infants have separate modes of construal for inanimate objects and for humans. Their research suggests that these infants understand that inanimate objects follow laws of continuous motion, but they do not apply these constraints to humans. Bering and Bjorkland's (2003) research on afterlife concepts also suggests that the mental domain is separable from the physical and biological domains. They found that young children understand mental activity to continue after bodily functions cease. Thus the mental domain appears to be special, particularly for supernatural concepts.

Some aspects of God concepts may be readily acquired, however theology and religious education may also play a role in their development. Despite the anthropomorphism apparent in LDS theology, overall the LDS participants construed God as more extraordinary than the TC, especially the adults. This surprising result may be due to the subtleties of theology as well as the later development of personal beliefs. In the LDS tradition, miracles are natural events that appear supernatural. Perhaps the responses of the LDS adults focus on the appearance of the extraordinary rather than on God's limitations. In addition, the TC adults may hold a view of God that is less extraordinary or more removed from interaction with the world. The results involving explanations suggest that the older LDS children appear to explain God in ordinary terms in line with a literal interpretation of certain aspects of LDS religious instruction. They are, however, not quite grasping the idea that the ordinary explanations of God's abilities are

really supernatural, as demonstrated by the responses of LDS adults. These more subtle understandings may come later.

Although the current study provides insight into what children and adults think God and dad can do, it also has a few limitations that will need to be addressed in future studies. The verbal demands of the questions may have led to an underestimate of what children actually think about God. In addition, the forced-choice questions did not guarantee insight into confirming that a participant thought that God or dad does things naturally or supernaturally. It is also not clear what type of God concept, a memorized, theologically correct one, or an on-line one, the task elicited. The children in the study were also older than those in previous studies. Perhaps younger children would show a more pronounced confusion between God and dad in terms of extraordinary abilities. Additionally, younger children may view the domains of abilities differently than older children.

Another limitation of the study is that the comparison between the religious traditions is not a clear-cut comparison. The Church of Jesus Christ of Latter-Day Saints is more homogenous in its religious instruction than are the churches of the Traditional Christians sampled in this study. Although this discrepancy might be a limitation, research by Gimenez et al (2000) suggests that explicit religious instruction does not appear to exert a strong influence on the development of the God concept. Children in both religious and secular schools learn about God from the surrounding culture.

Furthermore, the individual items may have been problematic. The domains and the items within them were drawn from traditional Christian theology and intuitive theory and might not adequately represent the way in which children, or adults for that matter, construe God.

Also, the questions were not able to capture the subtleties of the theologies of both religious traditions.

Despite these limitations, the present study adds to the few previous studies that have addressed this topic by demonstrating that God concepts are differentiated and acquired in a piece-meal fashion. In addition, the comparison of the development of LDS and TC God concepts suggests that certain aspects of the theologically correct view of God appear to emerge late in development, whereas other aspects appear to be easily acquired by young children. Future studies are needed to determine domain differences in the readiness of acquisition of supernatural concepts, but the present study provides an initial step.

APPENDIX

INTERVIEW PROTOCOL

Knowledge Items

Thinking: Let's think about something really strange. Can you think about a flying cat? Are you thinking about a flying cat right now? Now I wonder who knows what you're thinking.

Does _____ know that you are thinking of a flying cat right now?

If YES,

O.K. So, _____ knows what you are thinking.
what you are thinking.

Did he find out what is going on inside your
head, all by himself without doing anything,

or did someone tell him?

If NO,

O.K. So, _____ doesn't know

Is it because there is no way he can tell
what's going on in your head

or is it because he isn't looking?

Prayer: (Show picture of child praying). This is Sarah. She wants to have her very own elf. She didn't tell anybody what she wants. She is praying for an elf. but she is not saying the words out loud.

Does _____ know what Sarah is praying for?

If YES,

If NO,

O.K. So, _____ knows what Sarah is praying for.

O.K. So, _____ doesn't know what Sarah is praying for.

Can he tell what she is praying
all by himself without doing anything

Is it because there is no way he
can tell what she is praying

or does he have to listen with his ears?

Or because he is not listening with his ears?

Knowing: See this library here (show picture). This is the biggest library in the world. It has lots and lots and lots of books in it. There are lots of libraries and lots of books in the world, right?

Does _____ know everything that is in all the books in the world?

If YES,

If NO,

O.K. So _____ knows everything in all the books in the world.

O.K. So _____ doesn't know what's in all the books in the world.

Did he find out by reading all the books
with his eyes
or did he just know what's
inside all the books without looking?

Is it because there is no way he
could know what's in all the books
or because he isn't paying attention?

Physicality Items

Ability to walk through walls: See that wall over there? It's a very hard wall.

Could _____ go through that wall?

If YES,

If NO,

O.K. So _____ can go through that wall.

O.K. So _____ can't go through the wall.

Would he have to break down the wall
to go through,

Is it because his body is not strong enough
to go through the wall

or could he go through
without anything happening to the wall?

or because there is no
way a body can go through a wall?

Omnipresence: Sometimes _____ is at home, sometimes he's at work, and sometimes he is at the store.

Could _____ be at home, at work, and at the store all at the same time?

If YES,

O.K. So _____ can be all those places
at the same time.

If NO,

O.K. So _____ can't be in all those
places at the same time.

Would he have to go real fast to every
place,

Is it because he can't run fast enough
to get to all those places

or could he be in all those places at
the same time? nobody can be in three places at the same time?

or is it because

Invisibility:

Can _____ make himself invisible so that no one can see him?

If YES,

O.K. So _____ can make himself invisible.

If NO,

O.K. So _____ can't make himself invisible.

Would he have to do it by hiding
under something

Is it because he can't hide

or could he make
himself invisible without hiding?

or because nobody can
make himself invisible?

Power Items

Magical Transformation: See this? (Show child a stone or picture of a stone). What is it?

Could _____ turn this stone into a real live puppy?

If YES,

O.K. So _____ can turn this stone
into a real live puppy.

If NO,

O.K. So _____ can't turn this stone
into a real live puppy.

Could he do it just by wishing it

Is it because he never learned how to
make a puppy from a stone

or

would he have to use his hands to _____ or because

shape the stone into a puppy? you can't make a puppy from a stone?

Physical Power: See this? (Show child a picture of a mountain). What is it?

Could _____ lift up this mountain all by himself?

If YES,

O.K. So _____ can lift the mountain all
by himself.

If NO,

O.K. So _____ can't lift up the
mountain all by himself.

Does he use big muscles

Is it because his muscles aren't big
enough

or does he do it just by wishing it?

or because no muscles are

big enough to lift a mountain?

Healing: See this? (Show picture). This person has been blind since s/he was born. S/he was born without any eyes. No doctors can fix her/his eyes.

Could _____ make this person able to see?

If YES,

If NO,

O.K. So _____ can make this person able to see.

O.K. So _____ can't make this person able to see.

Would he do it with a medicine

Is it because he doesn't have the right medicine to do it

or could he do it just by wishing?

or because there is no medicine that can make eyes?

Biological Items

Was _____ once a little baby,

or was _____ always the way he is now?

Does _____ have a real body with arms and legs and everything

or does _____ live without a real body?

Does _____ have to eat and drink

or does _____ live without eating and drinking?

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